

SOIL EVALUATION DATA

SOIL EVALUATION AND OBSERVATION
PERFORMED ON 11/13/17
BY PATRICK BURKE, H. S. & T. GROUP, INC.
WITNESSED BY PHILIP LEGER, GRAFTON BOARD OF HEALTH AGENT

DH-1
0"-4" O
4"-120 C 2.5Y 7/7 SAND SINGLE GRAIN, LOOSE
NO GROUNDWATER OR MOTTILING OBSERVED

DH-2
0"-4" O
4"-120 C 2.5Y 7/7 SAND SINGLE GRAIN, LOOSE
NO GROUNDWATER OR MOTTILING OBSERVED

DH-3
0"-4" O
4"-120 C 2.5Y 7/7 SAND SINGLE GRAIN, LOOSE
NO GROUNDWATER OR MOTTILING OBSERVED

DH-4
0"-4" O
4"-120 C 2.5Y 7/7 SAND SINGLE GRAIN, LOOSE
NO GROUNDWATER OR MOTTILING OBSERVED

PERC-1
PERC TEST PERFORMED AT 24"-42"
PERC RATE: 24 GALLONS POURED IN
LESS THAN 15 MINUTES
USE <2 MPI

PERC-2
PERC TEST PERFORMED AT 30"-48"
PERC RATE: 24 GALLONS POURED IN
LESS THAN 15 MINUTES
USE <2 MPI

DESIGN CRITERIA:

HYDRAULIC LOADING RATE:
5 BEDROOMS x 110 GALLONS PER DAY (GPD) = 550 GPD
THIS DESIGN DOES NOT ALLOW FOR THE USE OF A GARBAGE GRINDER

LONG TERM ACCEPTANCE RATE (LTAR):
2 MINUTES/INCH CLASS I SOIL = 0.74 GPD/SF

SOIL ABSORPTION SYSTEM:
EFFECTIVE AREA REQUIRED BASED ON LTAR = 550 GPD/(0.74 GPD/SF)
= 744 SF

EFFECTIVE AREA FOR 1' DEEP x 3' WIDE TRENCHES =
(2 SIDEWALLS x 1') + 3' BOTTOM = 5 SF/LF
744 SF/(5 SF/LF) = 148.8 LF TRENCH LENGTH (REQUIRED)

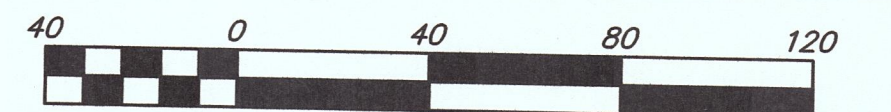
USE 3 ROWS, 50 LF EACH = 150 LF TOTAL CHAMBER LENGTH

EFFECTIVE AREA (PROVIDED) = 150 LF x (5 SF/LF) =
= 750 SF (PROVIDED) > 744 SF LEACHING AREA (REQUIRED)

SEPTIC TANK SIZE:
550 GPD x 200% = 1,100 GPD MINIMUM REQUIRED WITHOUT GARBAGE GRINDER;
USE 1,500 GALLON TANK

TIE DISTANCES

LOCATION	A (IPF)	B (RRF)
1 SIDE CENTER SEPTIC TANK	168.0	157.0
2 SIDE CENTER SEPTIC TANK	177.0	148.0
3 DISTRIBUTION BOX	183.0	155.0
4 OUTSIDE CORNER TRENCH 1	205.0	157.0
5 OUTSIDE CORNER TRENCH 3	185.0	157
6 OUTSIDE CORNER TRENCH 3	224.0	208.0
7 OUTSIDE CORNER TRENCH 1	242.0	207



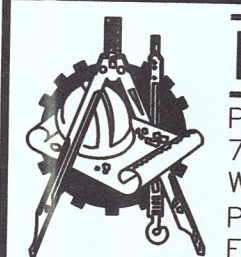
HORIZONTAL SCALE 1"=40'

LEGEND & ABBREVIATIONS

PROPERTY LINE	
84	EXISTING 1' CONTOUR
85	EXISTING 5' CONTOUR
RRF	EXISTING PROPERTY PIN
	EXISTING/PROPOSED WELL
BM ELEV=99.47	EXISTING BENCHMARK
114	PROPOSED CONTOUR
DH-1	DEEP HOLE TEST LOCATION
P-10	PERCOLATION TEST LOCATION
x94.2	SPOT GRADE
ST	SEPTIC TANK
7	TIE LOCATION

PLAN REVISIONS:

NO.	DATE	DESCRIPTION	BY



H. S. & T. GROUP, INC.
PROFESSIONAL CIVIL ENGINEERS & LAND SURVEYORS
75 HAMMOND STREET - 2ND FLOOR
WORCESTER, MASSACHUSETTS 01610-1723
PHONE: (508) 757-4944 FAX: (508) 752-8895
EMAIL: INFO@HSTGROUP.NET WWW.HSTGROUP.NET

SUBSURFACE DISPOSAL SYSTEM

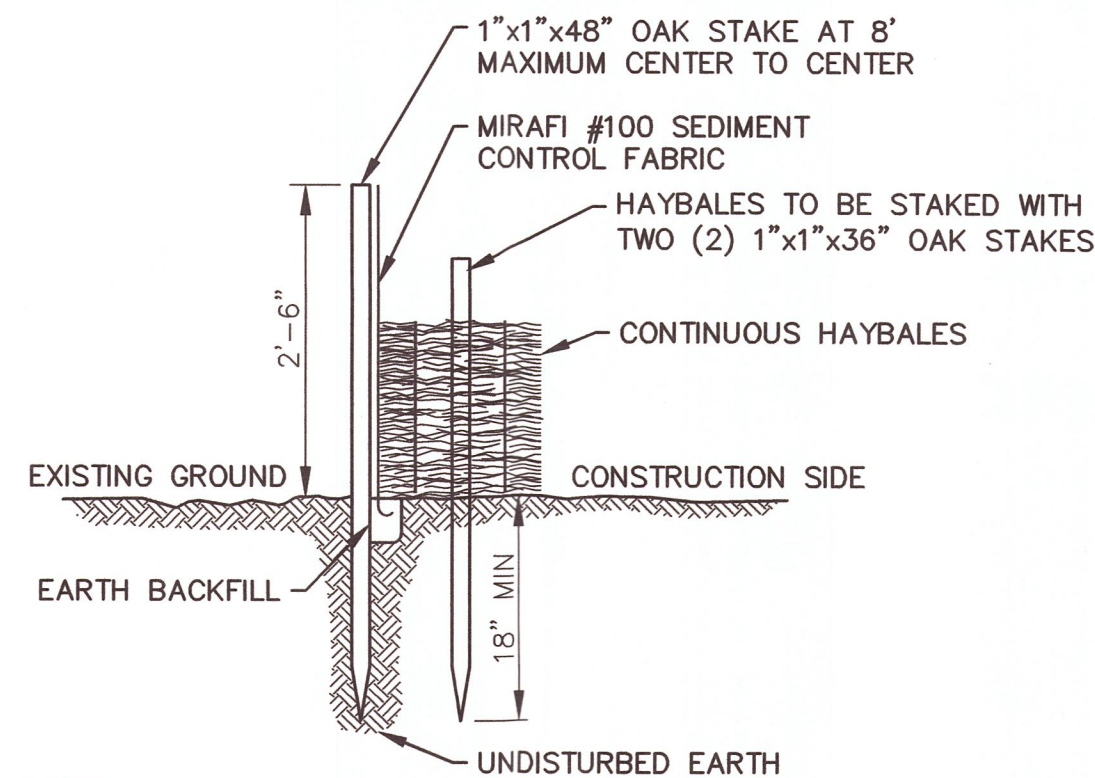
14 HUDSON AVENUE
GRAFTON MA

APPLICANT(S):
ERICA & MICHAEL SIEMASZKO
12 HUDSON AVENUE, GRAFTON MA 01519

OWNER(S):
ERICA & MICHAEL SIEMASZKO
12 HUDSON AVENUE, GRAFTON MA 01519

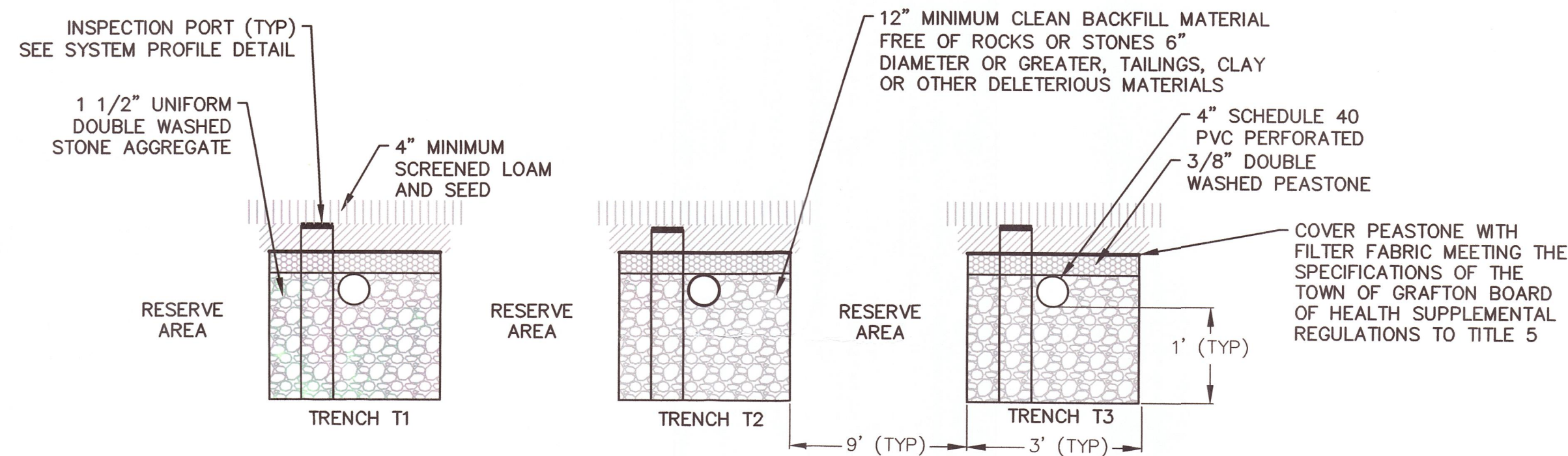
DATE: 02/27/2018	COMP'D: DJT	FIELD:	PS
SCALE: 1"=40'	CAD: CAR	FLD. BK:	
ZONE: ---	REV'D: HH	DWG:	XX

JOB NUMBER: 6324	SHEET NUMBER
DWG NUMBER: 6207	1 OF 2



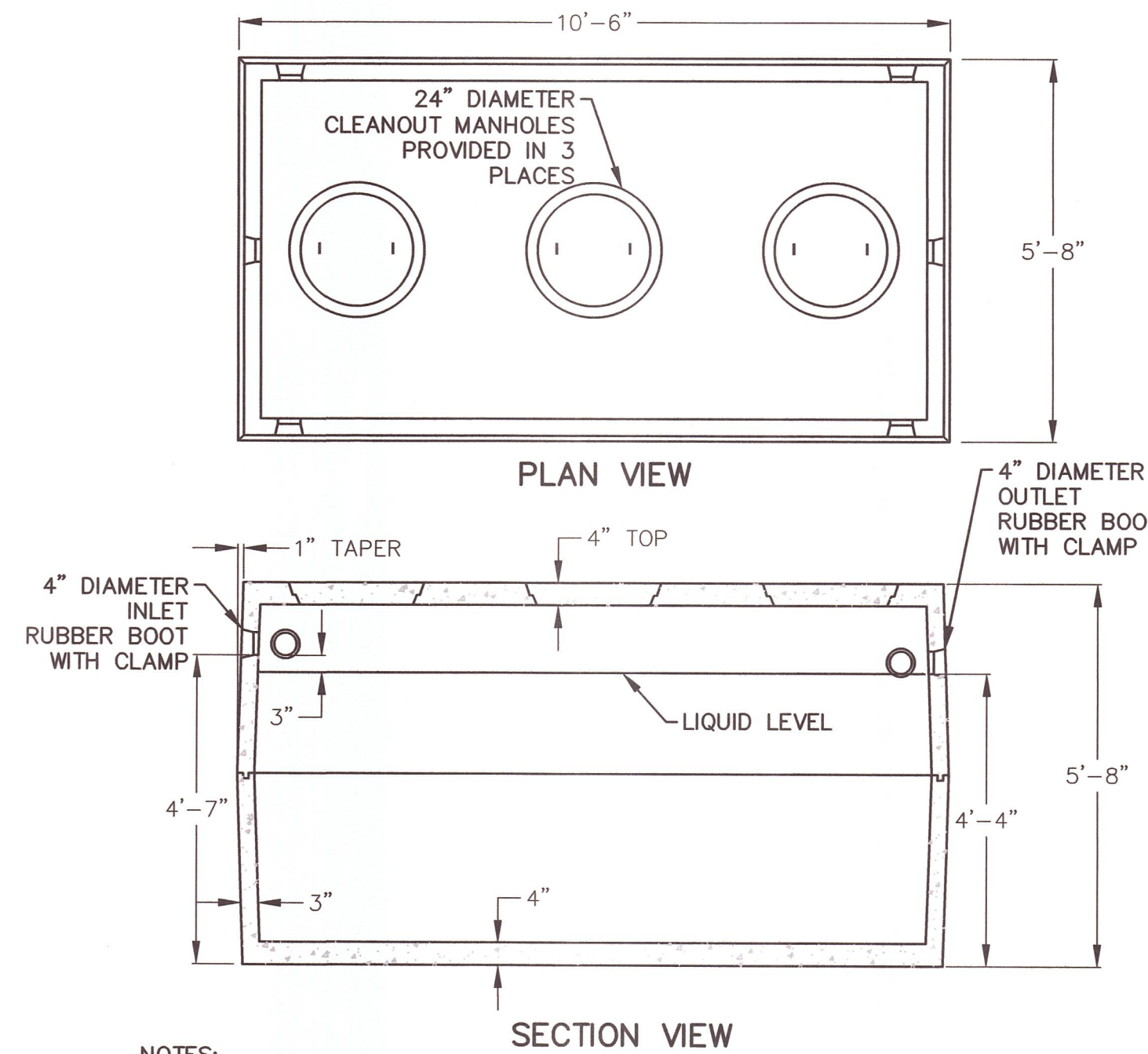
- NOTES:
1. HAYBALES SHALL BE PLACED IN A ROW WITH THE ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
 2. HAYBALES SHALL BE SECURELY ANCHORED IN PLACE BY TWO (2) 1"x1"x36" OAK STAKES DRIVEN THROUGH THE HAYBALES. THE FIRST STAKE IN EACH HAYBALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID HAYBALE TO FORCE HAYBALES TOGETHER.
 3. HAYBALES SHALL BE TWINE BOUND.
 4. INSPECTION OF THE HAYBALES SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
 5. HAYBALES SHALL BE REMOVED AND REPLACED WHEN THEY BECOME FILLED WITH SEDIMENT AND BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
 6. HAYBALES SHALL BE REMOVED WHEN THE PROJECT IS COMPLETED.

SILT FENCE WITH HAYBALES DETAIL
NTS



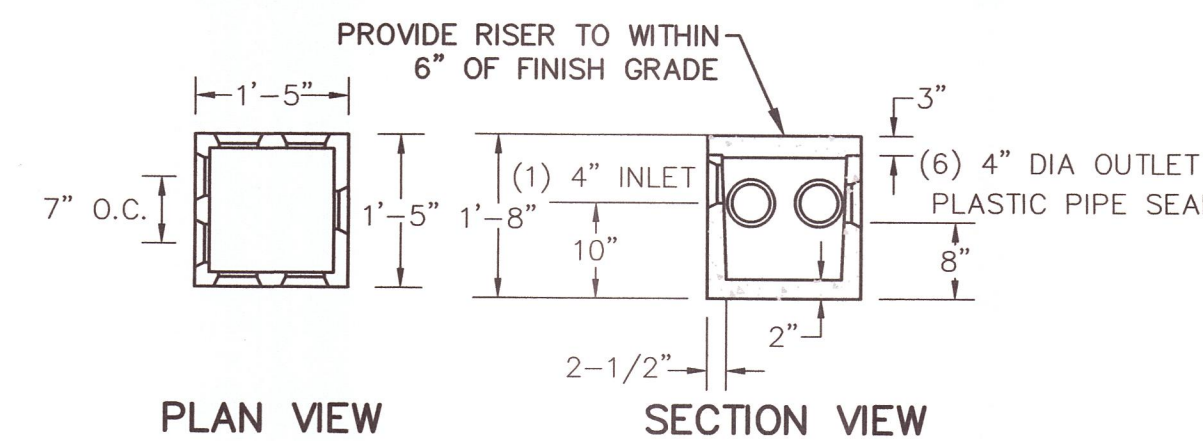
- NOTES:
1. ALL STONE AND AGGREGATE MUST MEET TITLE 5 SPECIFICATIONS AND MUST BE FREE OF IRON PARTICLES, FINES AND DUST, IN PLACE.
 2. ALL SAND MUST MEET TITLE 5 SPECIFICATION AND BE CLEAN GRANULAR SAND FREE OF ORGANIC MATTER AND DELETERIOUS MATERIALS.

STONE TRENCH LEACH FIELD CROSS SECTION DETAIL
NTS



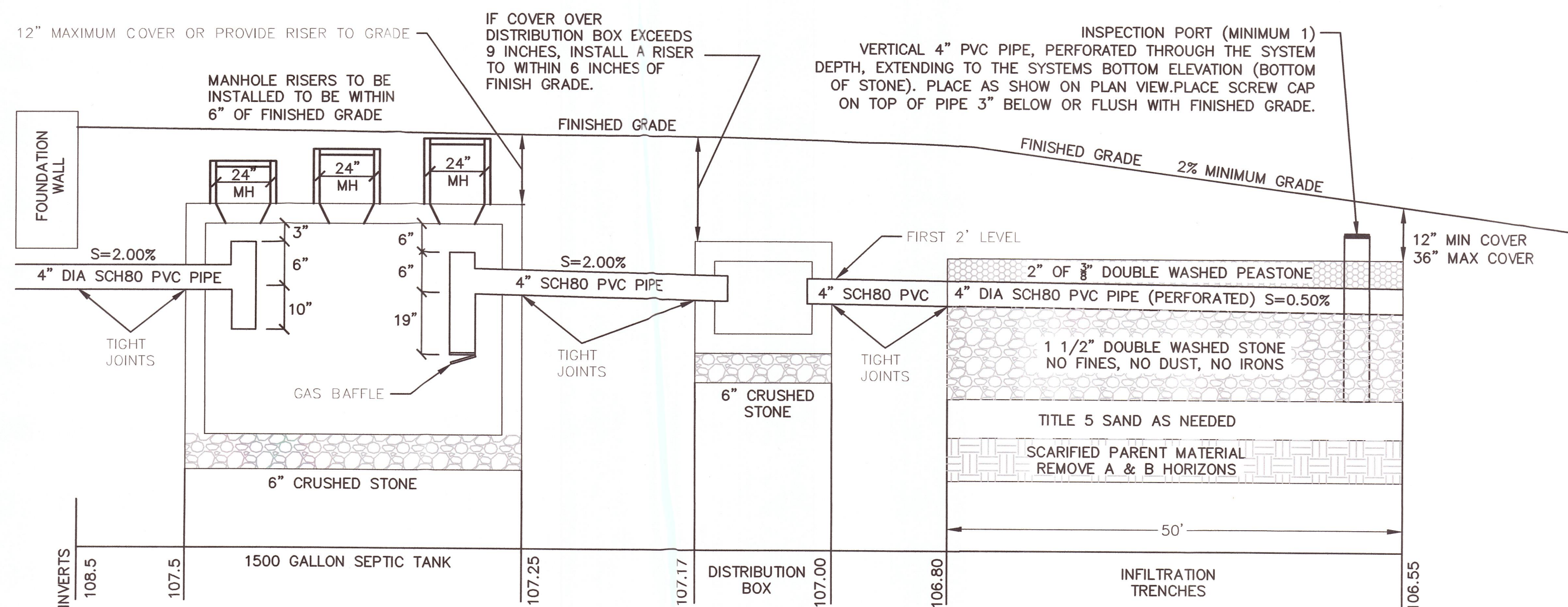
- NOTES:
1. CONSTRUCTION AND INSTALLATION OF SEPTIC TANK SHALL COMPLY WITH CMR 310 15.223.
 2. PLACE ONE ACCESS POINT TO WITHIN 6" OF FINISHED GRADE.
 3. PROVIDE MINIMUM OF 12" OF COVER OVER TANK.
 4. USE SHEA TK-1500 SEPTIC TANK OR EQUAL.
 5. SEPTIC TANK SHALL BE DESIGNED TO SUPPORT H-10 LOADING.

1,500 GALLON SEPTIC TANK DETAIL
NTS



- NOTES:
1. DISTRIBUTION BOX SHALL BE SHEA CONCRETE PRODUCTS ITEM NO. B-6DBH OR EQUAL.
 2. CONSTRUCTION AND INSTALLATION OF DISTRIBUTION BOX SHALL COMPLY WITH CMR 310 15.232.
 3. IF COVER OVER DISTRIBUTION BOX EXCEEDS 9 INCHES, INSTALL A RISER TO WITHIN 6 INCHES OF FINISH GRADE.
 4. DISTRIBUTION BOX SHALL BE CAPABLE OF SUPPORTING H-10 LOADING.

6 OUTLET STANDARD DISTRIBUTION BOX DETAIL
NTS



SEPTIC SYSTEM PROFILE DETAIL
NTS

40 0 40 80 120
HORIZONTAL SCALE 1"=40'

PLAN REVISIONS:			
NO.	DATE	DESCRIPTION	BY

HOSSEIN
HAGHANIZADEH
CIVIL
NO. 42529
REGISTERED PROFESSIONAL ENGINEER
STATE OF MASSACHUSETTS

DANIEL
J. TYNAN
NO. 40047
REGISTERED PROFESSIONAL ENGINEER
STATE OF MASSACHUSETTS

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DETAILS

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DATE: 01/26/2018	COMP'D: DJT	FIELD:	PS
SCALE: 1"=40'	CAD: CAR	FLD. BK:	
ZONE: ---	REV'D: HH	DWG:	XX

JOB NUMBER:	6324	SHEET NUMBER	2 OF 2
DWG NUMBER:	6207		